



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

P325 002 508

JAN - 6 2000

E.I. DuPont de Nemours & Co. Inc.
DuPont Chambers Works Facility
Deepwater, NJ 08023

Re: E.I. DuPont de Nemours & Co. Inc.
Pennsville Township, Salem County
NJPDES Permit No. NJ0083429

Dear Permittee:

Enclosed is the final renewal New Jersey Pollutant Discharge Elimination System/Discharge to Ground Water Permit to discharge to the ground waters of the State, issued in accordance with the NJPDES Regulations, N.J.A.C. 7:14A-1 et seq. Violation of any condition of this permit may subject you to significant penalties.

Any request for an adjudicatory hearing to contest the conditions of this permit must be made within 30 calendar days following your receipt of this permit. The request must follow the procedure outlined in N.J.A.C. 7:14A-8.9 and must include the information on the attached checklist. Failure to follow this procedure will result in denial of the request pursuant to N.J.A.C. 7:14A-8.9(e).

If you have any questions regarding this permit, please contact Frank Faranca of the Bureau of Case Management at 609-984-4071.

Sincerely,

Bruce Venner, Bureau Chief
Bureau of Case Management
Enclosures

C: Frank Faranca, NJDEP/BCM
Anne Pavelka, NJDEP/BGWPA
Terry Sugihara, NJDEP/BEERA
Andrew Park, USEPA

Administrative Hearing Request Checklist
and Tracking Form for Permits

I. Permit Being Appealed:

Title and Type of Permit

Issuance Date of Permit

Permit Number

II. Person Requesting Hearing:

Name

Name of Attorney (if applicable)

Address

Address of Attorney

III. Please Include the Following Information as Part of Your Request

- A. The date the permittee received the final permit;
- B. A list of all permit conditions and issues contested;
- C. The legal and factual questions at issue;
- D. A statement as to whether or not the permittee raised each legal and factual issue during the public comment period;
- E. Suggested revised or alternative permit conditions;
- F. An estimate of the time required for the hearing;
- G. A request, if necessary, for a barrier free hearing location for physically disabled persons;
- H. A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's processing of your hearing request to the Office of Administrative Law; and
- I. This form, completed, signed, and dated, with all of the information listed above, including statements, to:

Attention: Adjudicatory Hearing Request
Department of Environmental Protection
Office of Legal Affairs
CN-402
Trenton, NJ 08625

J. Copies of this submission (w/attachments) shall be sent to:

- 1. Case Manager
- 2. All co-permittees, if applicable

IV. Signature: _____ Date: _____

Division of Responsible Party Site Remediation

Final Permit Distribution List
Permit Renewal

NJPDES No: 0083429
Facility: E.I. DuPont de Nemours & Co. Inc.
Township: Pennsville Township Salem County
Reviewer: Frank Faranca, Bureau of Federal Case Management

| Recipient | | Address |
|-------------------------------|---|---|
| Applicant/Permittee | X | Mr. Albert Boettler E.I. DuPont de Nemours & Co. Inc. DuPont Chambers Works Facility Deepwater, NJ 08023 |
| Applicant/Permittee | X | Mr. Albert Boettler E.I. DuPont de Nemours & Co. Inc. DuPont Chambers Works Facility Deepwater, NJ 08023 |
| Owner | X | Mr. Albert Boettler E.I. DuPont de Nemours & Co. Inc. DuPont Chambers Works Facility Deepwater, NJ 08023 |
| Mayor | X | Mayor of Pennsville Township 90 North Broadway Pennsville, NJ 08070 |
| Municipal Clerk | X | Clerk of Pennsville Township 90 North Broadway Pennsville, NJ 08070 |
| Planning Board | X | Salem County Planning Board Old Court House Salem, NJ 08079 |
| Environmental Commission | X | New Jersey Association of Environmental Commissions P.O. Box 157 Mendham, NJ 07945-0157 |
| Board of Health | X | Laurence P. Devlin, Jr. Salem County Health Department 98 Market Street Salem, NJ 08079 |
| Municipal Utilities Authority | X | Pennsville Sewerage Authority 90 North Broadway Pennsville, NJ 08070 |

| | | |
|--|---|--|
| | X | Delaware River Basin Commission P.O. Box 7360 West Trenton, NJ 08628 |
| | X | Barry Tornick, Chief New Jersey Corrective Action Section USEPA Region II, Haz. Waste Fac. Branch 26 Federal Plaza, Room 1034 New York, NY 10278 |
| | X | Mike Poetzsch, Chief New Jersey Permits Section USEPA Region II, Haz. Waste Fac. Branch 26 Federal Plaza, Room 1037 New York, NY 10278 |



New Jersey Pollutant Discharge Elimination System

The New Jersey Department of Environmental Protection hereby restricts and controls the discharge of pollutants to waters of the State from the subject facility/activity in accordance with applicable laws and regulations. The permittee is responsible for complying with all terms and conditions of this authorization and agrees to said terms and conditions as a requirement for the construction, installation, modification or operation of any facility for the collection, treatment or discharge of any pollutant to waters of the State.

PERMIT NUMBER NJ0083429

Permittee

E.I. DUPONT DE NEMOURS & CO.
INC.
DUPONT CHAMBERS WORKS FACILITY
DEEPWATER, NJ 08023

Co-Permittee

Property Owner

E.I. DUPONT DE NEMOURS & CO.
INC.
DUPONT CHAMBERS WORKS FACILITY
DEEPWATER, NJ 08023

Location of Facility

E.I. DUPONT DE NEMOURS & CO.
INC.
CHAMBERS WORKS
LOT 1,1; BLOCK 185, 1
DEEPWATER, NJ

Current Authorization

Covered By This Approval
And Previous Authorization

Issuance
Date

Effective
Date

Expiration
Date

| | | | | |
|---|----------------------------------|-----------|-----------|-----------|
| F | LANDFILL - INDUSTRIAL/COMMERCIAL | 1/03/2000 | 2/03/2000 | 2/02/2005 |
| J | SURFACE IMPOUNDMENT - INDUSTRIAL | 1/03/2000 | 2/03/2000 | 2/02/2005 |

By Authority of:

Ronald Corcoran
DEP AUTHORIZATION
Ronald Corcoran, Assistant Director
Responsible Party Cleanup Element

(Terms, conditions and provisions attached hereto)

State of New Jersey Department of Environmental Protection

FACT SHEET

For NJPDES Hazardous Waste Closure and Post Closure Permit

NAME AND ADDRESS OF APPLICANT:

**E.I. du Pont de Nemours and Company Inc.
Chambers Works
Deepwater, NJ 08023**

NAME AND ADDRESS OF FACILITY:

**DuPont Chambers Works
Deepwater, Salem County
Pennsville and Carneys Point Township, Salem County**

NJPDES NUMBER: NJ0083429

EPA I.D. NUMBER: NJD002385730

DESCRIPTION OF FACILITY:

The DuPont facility located in Deepwater, New Jersey is a complex multi-product operation. This facility covers approximately 1455 acres in both Pennsville and Carneys Point Township, and is separated into Chambers Works to the south and Carneys Point works to the north.

The area surrounding the facility consists of moderately populated residential and agricultural areas. Two surface water bodies, the Delaware River and the Salem Canal, border the site. The two other surface water bodies that traverse the site are Henby Creek and Bouttown Creek. Whopping John Creek was dammed and converted into a surface impoundment, which was divided into "A", "B", and "C" basins in the 1970's. Since 1995 all three RCRA regulated basins except for the "A" basin vault have been closed and monitored under a RCRA post closure permit. The vault is currently scheduled to be closed in 2000 after the current non-RCRA ditch remediation activities are completed.

The Chambers Works employs approximately 2000 people, and manufactures approximately 600 products utilizing nearly 1500 separate chemical processes in over 30 different manufacturing buildings.

DuPont operates a commercial wastewater treatment plant, which accepts the majority of the liquid hazardous waste from the State of New Jersey. The wastewater treatment plant utilizes powdered activated carbon for the treatment of the wastewater and has a tertiary treatment system. The treated water is discharged into the Delaware River in accordance with a NJPDES / DSW (Discharge to Surface Water) Permit Number NJ0005100.

DESCRIPTION OF DISCHARGE:

The units, which are regulated under this permit, include:

1. Waste Water Basin complex – This area previously consisted of three separate unlined basins and approximately five miles of Process Water Ditch System (PWDS). The "A", "B" and "C" Basins are classified as hazardous waste management units which are subject to regulations under the Federal Resource Conservation and Recovery Act (RCRA) of 1976 and the New Jersey authorized Hazardous Waste Program. With the exception of a vault, Basin "A" (17.4 acres) is now closed but previously received untreated wastewater, non-contact cooling water and storm water prior to going to the wastewater treatment plant. Basin "B" (16.3 acres) previously received non-contact cooling water, storm water and treated water from the wastewater treatment plant for final polishing prior to discharge to the Delaware River. The unit has been closed under RCRA and now receives only

storm water and non-contact cooling water prior to discharge to the Delaware River. Basin "C" (3 acres) now closed previously received waste associated with the manufacturing of tetraethyl lead. The PWDS which previously carried process wastewater, stormwater and non-contact cooling water is closed and now only carries stormwater and non-contact cooling water to the wastewater treatment plant or to the "B" basin and subsequently to the Delaware River through a permitted outfall, NJPDES/DSW Permit #NJ0005100.

2. Secure "C" Landfill in the southern portion of Carney's Point Works - This landfill consists of four cells. Cell 1 is the single lined non-RCRA regulated cell since it was closed prior to the establishment of the RCRA regulations. Cells 2, 3 and 4 are currently operating cells permitted to receive hazardous waste. These cells are double lined and are equipped with leachate collection and leachate detection systems. This landfill receives sludge from the wastewater treatment plant and various types of drummed hazardous waste from on-site operations. Low level concentrations of volatile and semi-volatile ground-water constituents have been detected down-gradient of cell 1 and DuPont is currently implementing ground water corrective action. This permit only regulates the corrective action requirements for cell 1 of the landfill. Other NJPDES permits address the operational aspects of the landfill operations.

3. RCRA Units for which amended closure plans will be required under the permit -

a. Thermal Decontamination Furnace FR-65 - This furnace removed alkyl lead contamination from metal equipment and containers. It consisted of four main parts: furnace, afterburner, an evaporator cooler, and a bag house. Prior to treatment, the metal was stored at the satellite storage area. No free liquids were treated in this unit. This area needs to be investigated for potential soil and ground water contamination.

b. Lead Flue Dust Storage Area and the Lead Furnace Slag - This asphalt storage area was used exclusively for lead wastes produced at the Thermal Decontamination Furnace and lead treatment areas. The wastes were stored in this unit until they were shipped off-site for disposal. The lead flue dust and the lead slag were containerized at the furnace and transported to the storage area. No free liquids were handled in this unit. This area needs to be investigated for potential soil and ground water contamination.

c. Freon Spent Catalyst Storage Area - This storage area contained a 6000 gallon, lined railroad tank used until 1984 to store spent antimony pentachloride. This area needs to be investigated for potential soil and ground water contamination.

d. Telomer "A" Waste Container Storage Area - Prior to 1983, this unit was used to store drums of solid waste produced during Telomer "A" manufacture. This waste included antimony pentachloride, hydrofluoric acid, iodine and iodine pentachloride. This area needs to be investigated for potential soil and ground water contamination.

RECEIVING WATERS AND HYDROGEOLOGIC DESCRIPTION:

The actual or potential discharges of pollutants regulated by this permit are to the ground water of the State of New Jersey.

The facility's subsurface is a complex sequence of fill material, Holocene alluvial and tidal marsh (peat) deposits, interbedded Pleistocene fluvioglacial deposited (Cape May Formation), and Cretaceous aged deposits (Potomac-Raritan-Magothy Aquifer). The Holocene and Pleistocene deposits comprise a multilayered flow system: the "A" perched water zone, and the "B", "C" and "D" aquifer zones (also known as the Quaternary Aquifer System). These three units are hydraulically connected to different degrees due to discontinuous interbedded silt and clay layers. Two to three of these four zones become one zone in some locations. As such, the Quaternary Aquifer System ranges from unconfined to semi-confined to semi-confined conditions.

At approximately 100-200 feet below ground surface, the Cretaceous aged Potomac-Raritan-Magothy (PRM) Aquifer System is encountered. This system's sedimentary structure gives rise to a multi-layered flow system. The PRM Aquifer is a widely used potable water source in this region of the State.

GROUND WATER CONTAMINATION AND EXISTING CORRECTIVE ACTIONS:

Under natural ground water flow conditions, the Delaware River may be a recipient of a portion of ground water flow from the "B" aquifer underlying the DuPont facility. In response to identified ground water contamination, DuPont installed an interceptor well system (IWS) in 1970 designed to collect ground water and restrict the off-site migration of ground water for the protection of human health and the environment. This system has been upgraded since that time to include additional interceptor wells that currently pump more than 1.5 million gallons of ground water per day. The collected ground water is treated at the DuPont on-site wastewater treatment plant and is ultimately discharged in accordance with their NJPDES Discharge to Surface Water permit to the Delaware River in addition to the nearly 40 million gallon per day of treated waste water. An administrative consent order was negotiated between NJDEP and DuPont in 1984 which contains the requirement to utilize the IWS to contain ground water necessary for the protection of human health and the environment.

Ground water flow data indicates that the corrective action program has been successful in preventing the off-site migration of hazardous constituents in the Quaternary Aquifer System beneath the Chambers Works section of the facility.

CLASSIFICATION EXCEPTION AREAS

Pursuant to the February 1, 1993 Ground Water Quality Standards (N.J.A.C. 7:9-6 et seq.), the Department of Environmental Protection (Department) is designating two Classification Exception Areas for the ground water beneath certain portions of the DuPont Chambers Works site in Pennsville and Carneys Point townships. In designating these Classification Exception Areas, the Department is suspending the designated uses (potable for the Class IIA Quaternary Aquifer and Potomac Raritan Magothy Aquifer System beneath the site) and constituent standards for certain organic and inorganic compounds in the indicated classification exception area for the duration of this permit.

PERMIT CONDITIONS:

This New Jersey Pollutant Discharge Elimination System/Discharge to Ground Water Permit (NJPDES/DGW) NJ0083429 is being issued to regulate the closure and post closure of the hazardous waste land disposal units at the facility, the amended closure of certain RCRA units and corrective action at cell 1 of the hazardous waste secure "C" landfill.

This permit is being issued in accordance with the NJPDES Regulations (N.J.A.C. 7:14A-1 et seq.) and the Hazardous Waste Regulations ((N.J.A.C. 7:26G-1 et seq.)). These conditions were set forth in consideration of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and its implementing regulations, the New Jersey Pollutant Discharge Elimination System (NJPDES), N.J.A.C. 7:14A-1 et seq. The subchapters applicable to NJPDES Discharge to Ground Water permits include: Subchapter 1, Abbreviations, Acronyms, and Definitions; Subchapter 2, Program Requirements; Subchapter 6, Conditions Applicable to all NJPDES Permits; Subchapter 7, Requirements for Discharge to Ground Water; Subchapter 8, Additional Requirements for Underground Injection Control Program; Subchapter 15, Procedures for Decision Making - NJPDES Permit Processing Requirements; Subchapter 16, Transfer, Modification, Revocation, Reissuance, Renewal, Suspension and Revocation of Existing Permits; Subchapter 17, Procedures for Decision Making - Adjudicatory Hearing and Stays of Permit Conditions; Subchapter 18, Public Access to Information and Requirements for Determination of Confidentiality. The conditions are also based on the administrative record, which contains any permit application submitted, correspondence concerning the permit, the Fact Sheet and documents cited therein, the results of any past monitoring, any Administrative Order, Administrative Consent Order, or Memorandum of Agreement information submitted pursuant to the Department's Technical Requirements for Site Remediation (N.J.A.C. 7:26E-1.1 et seq.), Underground Storage of Hazardous Substances Act or the Industrial Site Recovery Act, the final permit, and any past permits issued to the facility.

The permit conditions are consistent with the New Jersey Ground Water Quality Standards, N.J.A.C. 7:9-6 et seq. And the New Jersey Hazardous Waste Regulations at N.J.A.C. 7:26G-1 et. seq.

PUBLIC NOTICE

The public notice for the draft permit appeared in "Today's Sunbeam" on November 1, 1999. No comments were received on the draft permit.

CONTACT PERSON

Additional information concerning the final NJPDES permit may be obtained between the hours of 8:00 A.M. and 3:30 P.M., Monday through Friday from Frank Faranca, Bureau of Case Management at 609-984-4071.

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GENERAL CONDITIONS FOR ALL NJPDES/DGW PERMITS

The New Jersey Pollutant Discharge Elimination System (NJPDES) regulations (N.J.A.C. 7:14A-1 et seq.) as authorized by the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) identify requirements for all Discharge to Ground Water Permits. Information concerning these general permit requirements may be found in the following sections of the NJPDES regulations:

| <u>Permit Requirements</u> | <u>Citation</u> |
|--|-----------------|
| Abbreviations, Acronyms, and Definitions | Subchapter 1 |
| Program Requirements | Subchapter 2 |
| Conditions Applicable to all NJPDES Permits | Subchapter 6 |
| Requirements for Discharge to Ground Water | Subchapter 7 |
| Additional Requirements for Underground Injection Control Program | Subchapter 8 |
| Ground Water Monitoring Requirements for Hazardous Waste Facilities | Subchapter 10 |
| Procedures for Decision Making - NJPDES Permit Processing Requirements | Subchapter 15 |
| Transfer, Modification, Revocation, Reissuance, Renewal, Suspension and Revocation of Existing Permits | Subchapter 16 |
| Procedures for Decision Making - Adjudicatory Hearing and Stays of Permit Conditions | Subchapter 17 |
| Public Access to Information and Requirements for Determination of Confidentiality. | Subchapter 18 |

PART II - GROUND WATER MONITORING REQUIREMENTS

A. General Conditions

1. Within 45 days of completion of any well installation on-site DuPont must submit well certification forms A and B (Appendix A) to the Department for each well installed.
2. Within 60 days of the effective date of the permit DuPont must submit a map to the Department which shows the location of all the wells at the facility including any newly installed wells.
3. The permittee shall inspect each monitor well at a frequency sufficient enough to insure the structural integrity of each well so that a sample can be collected and analysis reported in accordance with the permit reporting schedule. The permittee shall maintain a complete inspection record including the dates of inspection, inspector's name, and conditions observed. These records shall be made available to the Department upon request.
4. If permitted water quality monitor wells are damaged or are otherwise rendered inadequate for their intended purpose, the Department must be notified in writing within 5 days of discovering the damage. The letter shall include the damaged wells, the cause and extent of the damage, and the date that the wells will be operational. DuPont should indicate if the sampling schedule will be affected. The damaged well must be repaired, or sealed within 60 days of discovery of the damage. The well may be replaced in the sampling or water level monitoring program with another existing well if DuPont can justify that the well will serve the same purpose. If a sampling event is missed, the well must be sampled at least two weeks after well development and no longer than one month after development.
5. DuPont may petition the Department to change the sampling programs. Any changes to these programs will not be considered a major modification of this permit.
6. All ground water samples must be collected in accordance with DuPont's Ground Water Sampling and Analysis Plan (GWSAP) dated December 13, 1993. All sampling procedures and QA/QC procedures must be consistent with most recent version of the NJDEP Field Sampling and Procedure Manual. In addition, all QA/QC documentation must be maintained at the facility and submitted to the Department upon request. Within 6 months of the effective date of this permit, DuPont shall submit an updated GWSAP for Department approval.

B. Post Closure Ground Water Monitoring Requirements for "A", "B" and "C" Basins and the Process Water Ditch System

1. DuPont shall sample point of compliance wells for the "A", "B", and "C" Basins shown in Figure 1A according to the schedule and analyte list in Table 1, Part 1A and Part 1B.

2. DuPont shall sample perimeter monitoring wells shown in Figures 1A and 1B according to the schedule and analyte list in Table 1, Part 2A and Part 2B.

C. Ground Water Monitoring Requirements for the Corrective Action at "C" Landfill

1. DuPont shall sample point of compliance wells for the secure C landfill shown in Figure 1 according to the schedule and analyte list in Table 1, Part 3.

D. Classification Exception Areas

1. Pursuant to the February 1, 1993 Ground Water Quality Standards (N.J.A.C. 7:9-6 et seq.), the Department of Environmental Protection (Department) is designating Classification Exception Areas for the ground water beneath the DuPont Chambers Works site in Pennsville and Carney's Point Townships. The Department bases this decision on the fact that a) the ground water at the site is hydraulically controlled by ground water recovery systems necessary for the protection of human health and the environment b) DuPont signed an Administrative Consent Order with the Department in which they committed to remediating the RCRA land disposal units at the site, c) DuPont is complying with their EPA Hazardous and Solid Waste Management Permit which requires DuPont to identify and reduce the sources of contamination on-site, d) continued use of the property for industrial purposes is expected to continue in the future, e) the constituent standards have been exceeded for a number of constituents at the site.

A Classification Exception Area (CEA) has the effect of suspending the designated uses (potable for the Class IIA Quaternary Aquifer and Potomac Raritan Magothly Aquifer System beneath the site) and constituent standards in the indicated areas for the duration of this NJPDES/DGW Permit. Upon expiration of this permit, the status of the CEA will be reevaluated. "CEA One" includes groundwater beneath Lots 1,2,3,4, & 5, of Block 301, Pennsville Township, Salem County to a depth of about 200 feet.. Table 2 lists the compounds for which the constituent standards are suspended for the duration of this permit. CEA Two includes groundwater beneath Lot 1 of Block 185, Carney's Point Township, Salem County to a depth of about 200 feet. Table 3 lists the compounds for which the constituent standards are suspended for the duration of this permit. Figure 2 shows the location of the two CEAs.

All other constituent standards apply to these areas, with the exception of those attributable to background or upgradient sources or associated with localized effects of the remedial activities. Should DuPont identify additional compounds within the classification exception areas through regular sampling, DuPont must notify the Department in writing, and the Department will add the compounds to the classification exception area.

**PART III - SPECIAL CONDITIONS FOR E.I. DUPONT CHAMBERS WORKS
(Equivalent to a RCRA Closure and Post Closure Program)**

A. Closure/ Post Closure Requirements for the RCRA "A" & "B" Basin

1. This permit requires DuPont to continue the implementation of closure of the "A" and "B" Basins in accordance with the DuPont November 15, 1991 "A" and "B" Basin Remediation Plan, the DuPont June 1992 Design Criteria Report, the DuPont November 14, 1992 Final Design Submittal and subsequent correspondence relating to these documents. A summary of each major phase of closure is outlined below.

a. Facilities to Replace "B" Basin during Remediation

DuPont has provided temporary and/or permanent facilities needed to replace the "B" Basin's function as a finishing basin for effluent from the non-contact cooling water system and storm water runoff.

Note: The Waste Water Treatment Plant Effluent no longer flows to the "B" Basin.

b. Dewatering and Bulking of Sludge and Subsoil

DuPont has completed a dewatering and bulking process to consolidate the sludge and subsoil to achieve strength properties required to construct a vault.

Dewatered and bulked sludge and soil have been and will be transferred to an in-situ vault and flood dike protection system.

c. In-Situ Vault

1. DuPont will construct a vault and 100 year flood protection dike system around the vault, which will contain all dewatered and bulked sludge and subsoil. The vault will consist of structural fill subbase material, a finer system that affords protection from the constituents associated with the waste materials and a cap designed to minimize infiltration, and to reduce leaching.

2. DuPont will continue to submit semiannual update reports on closure activities.

3. In accordance with the DuPont February 16, 1999 letter (A. Boettler to F. Faranca), closure must be completed on or about the end of April 2000. A closure extension may be granted by the NJDEP if DuPont submits a reasonable technical justification for the extension. This will not result in a major modification to the permit.

4. In accordance with 40 CFR Part 264.115, within 60 days of completion of closure DuPont must submit to the Department certification by the owner/operator and an independent

registered professional engineer that the hazardous waste management unit has been closed in accordance with the approved closure plan.

5. Within 90 days of completion of closure DuPont must submit to the Department a remedial action report which meets the requirements of N.J.A.C. 7:26E-6.6.

6. Post closure care for A and B basin will be conducted in accordance with DuPont's August, 1995 revised Post Closure Plan and subsequent correspondence on this subject. Post closure ground water requirements are discussed in Section C below and Part II.

B. Post Closure Requirements for the Process Water Ditch System ("A" and "C" Ditches)

1. Post closure activities will include the maintenance of the newly installed system of pipes and swales which replace the Process Water Ditch System ("A" and "C" ditches). Additional post closure ground water activities are discussed in Section C below and Part II.

C. Closure and Post Closure Ground Water Monitoring/Remediation Requirements for the "A", "B", and "C" Basins and the Process Water Ditch System ("A" and "C" ditches) and Miscellaneous Ground Water Corrective Action Programs

1. Operation of the Interceptor Well System (IWS) is a requirement for post closure of the land disposal units. DuPont must pump a monthly daily average of 1.5 mgd from the B, C, and D aquifers beneath the Chambers Works portion of the facility until such time that DuPont can demonstrate that an alternate pumping rate is protective of human health and the environment. At any time DuPont may petition the Department to modify the pumping rate if DuPont can justify that the modifications are protective of human health and the environment. Approval of such a modification will not be considered a major modification of the permit.

2. DuPont will pump from SWMU dewatering system at a sufficient rate to protect human health and the environment. Any modifications to the dewatering will not be considered major modifications to the permit. NJDEP approval is required before any changes are implemented to an existing program or before a new program is initiated.

3. DuPont will pump well J05-W01E at a sufficient rate to hydraulically contain groundwater along the southern perimeter of Chambers Works to be protective of human health and the environment. Any modifications to existing or newly proposed Corrective Action Programs will not be considered major modifications to the permit. NJDEP approval is required before any changes are implemented to an existing program or before a new program is initiated.

4. On a quarterly basis DuPont must determine ground water elevation measurements from a sufficient number of wells and staff gauges listed in Table 4. The purpose of the water level measuring program is to demonstrate that the corrective action programs are adequately controlling the ground water in the B, C, D aquifers, and the A zone at SWMU5, beneath the site. Quarterly groundwater contour maps must be constructed for the B, C, and D aquifers, and the A zone at SWMU5, and submitted to the Department on a semi-annual basis as part of the

DuPont semiannual report. Changes to Table 4 will not be considered a major modification of the permit.

5. The instantaneous and monthly flow rates from each recovery well must be recorded monthly and submitted to the Department on a semi-annual basis.

6. The background wells for Chambers Works Facility are the U08-MOI well cluster in the "B", "C" and "D" aquifers. Until such time that DuPont expresses the need to turn off the ground water recovery system, the less stringent of the quality of the background wells or the Class IIA criteria stipulated in the Ground Water Quality Standards (N.J.A.C. 7:9-6 et seq.) shall designate the initial ground water protection standards. Prior to turning off the recovery system, DuPont may apply for an alternate concentration limit in accordance with N.J.A.C. 7:14A-10.8 which if approved, would become the ground water protection standard. DuPont must petition the Department to turn off the recovery system. In this petition DuPont must demonstrate that the ground water protection standards have not been exceeded for three consecutive sampling rounds in at least the Chambers Works perimeter wells.

7. Following shutdown of the recovery system, the monitor wells shall be monitored for a compliance period of three years. DuPont must submit to the Department for approval, a sampling plan for the three-year compliance period. If after this compliance period the ground water still meets the ground water protection standards, the recovery system may be dismantled. If the ground water protection standards are exceeded, then corrective action must be re-instituted. Any changes to the monitoring program will not be considered a major modification of the permit.

8. DuPont shall sample point of compliance wells for the "A", "B", and "C" Basins shown in Figure 1 according to the schedule and analyte list in Table 1, Part 1A and 1B.

9. DuPont shall sample the perimeter wells shown in Figure 1 according to the schedule and analyte list discussed in Part II.

10. Post closure monitoring shall be conducted for a period of 30 years beyond the completion of closure of the hazardous waste land disposal units. The Department reserves the right to extend the post closure period beyond 30 years if the extension is necessary to protect human health and the environment.

D. Corrective Action Requirements for the Secure "C" Landfill

1. DuPont shall pump wells Q20-M02B and R20-M02B at a rate of approximately 6 gpm and 7 gpm respectively. If DuPont determines or is notified by the Department that these well locations and/or pumping rates are not sufficient to control the plume then DuPont must submit a report to the Department which proposes a revised corrective action program. At any time DuPont may petition the Department to reduce the pumping rate if DuPont can justify that the reduced rates are protective of human health and the environment. Approval of such a program will not be considered a major modification of the permit.

2. The background wells for the "C" landfill are wells Q23-M01B and S21-M01B. The ground water protection standard for secure "C" landfill shall be the less stringent of the ground water quality of the background wells or the Class IIA criteria stipulated in the Ground Water Quality Standards (N.J.A.C. 7:96 et seq.). DuPont may apply for an alternate concentration limit in accordance with N.J.A.C. 7:14A-10.8, which, if approved, would become the ground water protection standard. DuPont must petition the Department to turn-off the recovery system. In this petition, DuPont must demonstrate that the ground water protection standards have not been exceeded for a period of three consecutive sampling rounds.

3. Following shutdown of the recovery system, the monitor wells shall be monitored for a compliance period of three years. DuPont must submit for approval a sampling plan for the three-year compliance period. If after this compliance period, the ground water still meets the ground water protection standards, the recovery system may be dismantled. If the ground water protection standards are exceeded, then corrective action must be reinstated. Any changes to the monitoring program will not be considered a major modification of the permit.

4. The point of compliance wells for corrective action at Cell one (1) are P20-M01B, P21-M01B, P21-M03B, Q20-M02B, Q20-M03B, Q21-M01B and R20-M02B. Well locations are shown in Figure 1. Sampling for these wells is discussed in Part II. However, sampling for P20-M01B and Q20-M03B is not required while the C landfill Corrective Action Program is active.

E. Amended Closure Plans for RCRA Units

1. Within 90 days of the effective date of this permit, Du Pont should submit to the Department an amended closure plan in accordance with 40 CFR Part 265.112(c) to investigate potential soil contamination in accordance with 40 CFR Part 265.114 and resulting potential ground water contamination in accordance with N.J.A.C. 7:26E-4.4 for the following RCRA units:

Thermal Decontamination Furnace FR-65
Lead Flue Dust Storage Area and Lead Furnace Slag
Freon Spent Catalyst Storage Area
Telomer "A" Waste Container Storage Area

F. General Conditions (Semi-Annual Reports)

1. On a semi-annual basis (by October 31, and April 30 of each year) DuPont will submit to the Department a summary report which includes the following:

- a. A discussion of the status of the corrective action programs at the facility.
- b. Recommendations as to needed changes in the recovery program and monitoring programs.
- c. Quarterly ground water contour maps for the B, C, D, and E aquifers, and the A zone at SWMU5.
- d. Summaries of all analytical data collected in that six-month period including field and trip blanks. Electronic data submissions applications (EDSA) in accordance N.J.A.C. 7:26E-3.13(c)3.v.
- e. Instantaneous and monthly flow rates for each recovery well.
- f. Summaries of the results of the statistical analyses on all ground water analytical data using the Shewart-Cusum control charts.
- g. Trend charts of the TOC plus TOX concentrations and total organic compound concentration versus time for each well as appropriate.
- h. Bubble maps for the B, C and D aquifers for Total Organic Compounds (measured and/or predicted).
- i. Updated new geologic cross sections if significant new geologic data is obtained.
- j. Quality Assurance reporting issues as outlined in Section 5.0 of Appendix F of DuPont's December 30, 1993 NJPDES/DGW Permit No. 83429, Renewal Application Supporting Documentation. Within 6 months of the effective date of this permit, DuPont must submit an updated Quality Assurance/Quality Control Program for NJDEP approval.

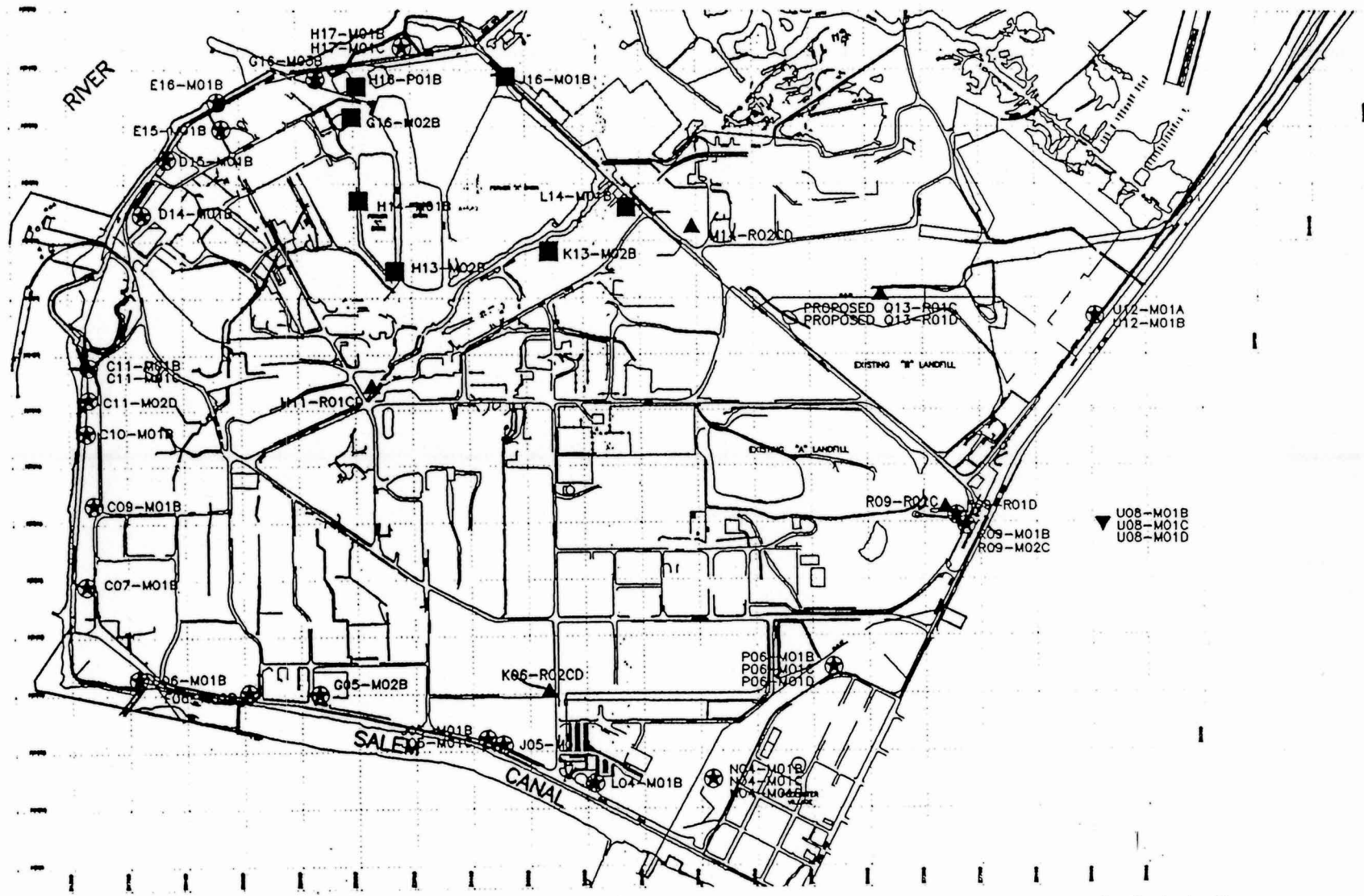
2. Three (3) copies of all submittals required under this permit should be submitted to the following address:

Frank Faranca
Bureau of Federal Case Management
Responsible Party Clean-up Element
NJDEP
P.O. Box 028
Trenton, NJ 08625

3. The Department must be notified at least two weeks prior to the initiation of any remedial activities and well installations.



DELAWARE



■ POST CLOSURE MONITORING FOR BASINS
▲ NWS

● C LANDFILL MONITORING WELLS AND
CORRECTIVE ACTION WELLS
⊗ PERIMETER MONITORING

▼ BACKGROUND WELL

SCALE

1100 0 1100 FEET



Corporate Remediation Group

*An Alliance between
DuPont and The W-C Diamond Group*

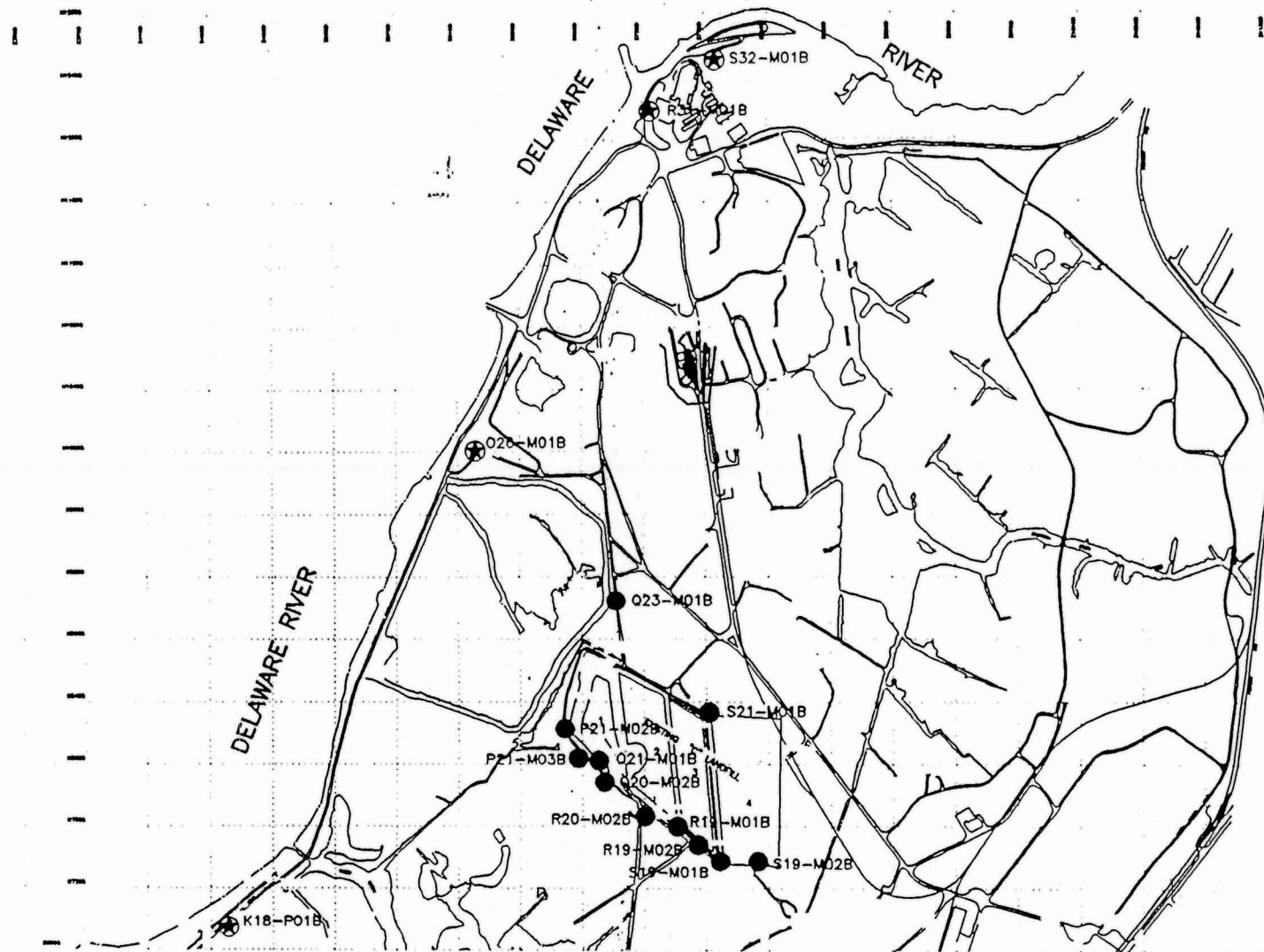
Barley Mill Plaza, Building 27
Wilmington, Delaware 19806-0027

RTLE:

MONITORING AND CORRECTIVE ACTION PROGRAMS

**DUPONT CHAMBERS WORKS
DEEPWATER, NEW JERSEY**

| | | |
|---------|------|--------------|
| DATE: | DES: | FILE NUMBER: |
| CHG: | APP: | 7141BOT |
| DATE: | REV: | FIGURE NO.: |
| 10/1/99 | 0 | 1A |



■ POST CLOSURE MONITORING FOR BASINS

▲ IWS

● C LANDFILL MONITORING WELLS AND
CORRECTIVE ACTION WELLS

⊗ PERIMETER MONITORING

SCALE

1100 0 1100 FEET



Corporate Remediation Group
An Alliance between
DuPont and The F-C Diamond Group

Barley Mill Plaza, Building 27
Wilmington, Delaware 19880-0027



TITLE:

MONITORING AND CORRECTIVE ACTION PROGRAMS

**DUPONT CHAMBERS WORKS
DEEPWATER, NEW JERSEY**

DWH:
TIQ
CHKD:
SWN
DATE:
10/1/99

DES:
APPD:
REV:
0

FILE NUMBER:
7141TOP
FIGURE NO.:
1B

Figure 2 - Location of CEA 1 and CEA 2

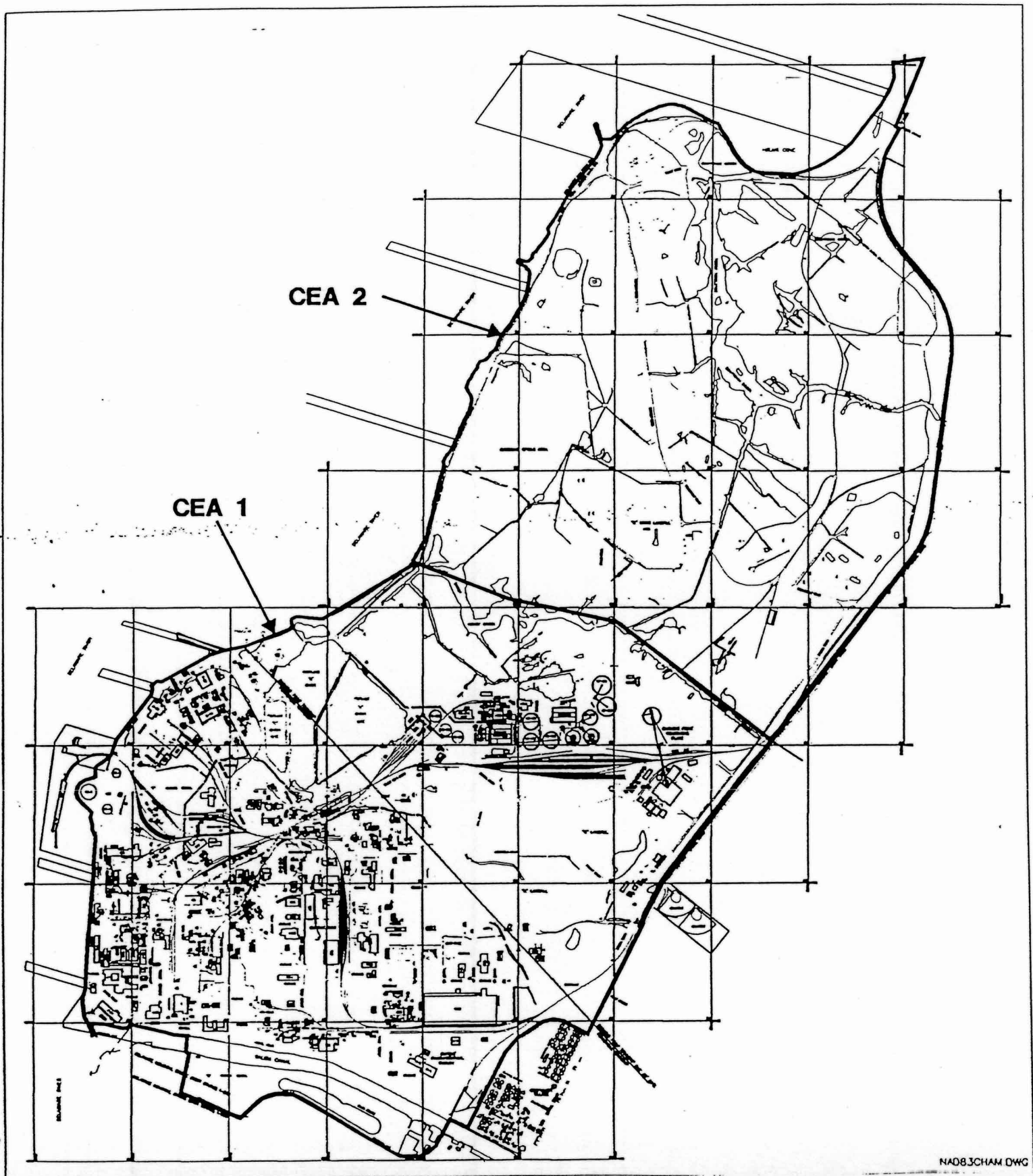


Table 1: Part 1A
Basins Post Closure Groundwater Monitoring Requirements

Sampling Schedule

| Sampling event | | Jan 1999 | | Jul 1999 | | Jan 2000 | | Jul 2000 | | Jan 2001 | | Jul 2001 | | Jan 2002 | | Jul 2002 | | Jan 2003 | | Jul 2003 | | Jan 2004 | |
|---|----------|----------|-----|----------|-----|----------|-----|----------|------|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|------|----------|-----|
| Sampling parameter | | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 | IND1 | PP1 |
| Closure and Post Closure for the A, B, & C Basins (7) | G16-M02B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |
| | H13-M02B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |
| | H14-M01B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |
| | H16-P01B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |
| | K13-M02B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |
| | J16-M01B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |
| | L14-M01B | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- | SA | -- | SA | -- | SA | -- | SA | -- | SA | TRIE | SA | -- |

Notes:

Frequency

SA = semiannually

Ann = annually

BIE = biennially (every two years)

TRIE = triennially (every three years)

-- not required

Analyte Lists (attached)

IND1 = indicator parameters

PP1 = priority pollutant list (as defined in Table 1, Part 1B)

. Table 1, Part 1B
Basins Post Closure Groundwater Monitoring Requirements

| Basin Closure Monitoring Program Analyte List | | | |
|---|--|----------------------------|----------------------------------|
| Priority Pollutant Volatile Organics | Priority Pollutant Semivolatile Organics | Additional Parameters | |
| Benzene | Base Neutral Extractable | Di-n-octyl phthalate | Aniline |
| Bromodichloromethane | Acenaphthylene | Fluoranthene | 4-Chloroaniline |
| Bromoform | Acenaphthene | Fluorene | o-Toluidine |
| Bromomethane | Anthracene | Hexachlorobenzene | Trichlorofluoromethane |
| Carbon tetrachloride | Benzidine | Hexachlorobutadiene | Xylene |
| Chlorobenzene | Benzo(a) anthracene | Hexachlorocyclopentadiene | Dissolved lead |
| Chloroethane | Benzo(b) fluoranthene | Hexachloroethane | |
| Chloroform | Benzo(k) fluoranthene | Indeno(1,2,3-c,d)pyrene | |
| Chloromethane | Benzo(ghi) perylene | Isophorone | |
| Dibromochloromethane | Benzo(a) pyrene | Naphthalene | |
| 1,1-Dichloroethane | bis(2-Chloroethoxy) methane | Nitrobenzene | Priority Pollutant Total Metals: |
| 1,2-Dichloroethane | bis(2-Chloroethyl) ether | Nitrosodimethylamine | Aluminum |
| 1,1-Dichloroethene | bis(2-Chloroisopropyl) ether | N-Nitroso-diphenyl amine | Arsenic |
| trans-1,2-Dichloroethene | bis(2-Ethylhexyl) phthalate | N-Nitroso-di-n-propylamine | Beryllium |
| 1,2-Dichloropropane | 4-Bromophenyl phenyl ether | Phenanthrene | Cadmium |
| cis-1,3-Dichloropropene | Butyl benzyl phthalate | Pyrene | Iron |
| trans-1,3-Dichloropropene | 2-Chloronaphthalene | 1,2,4-Trichlorobenzene | Lead |
| Ethylbenzene | 4-Chlorophenyl phenyl ether | Acid Extractable(1) | Nickel |
| Methylene chloride | Chrysene | 4-chloro-3-methylphenol | Sodium |
| 1,1,2,2-Tetrachloroethane | Di-n-butylphthalate | 2-Chlorophenol | |
| Tetrachloroethene | Dibenzo (a,h) anthracene | 2,4-Dichlorophenol | |
| Toluene | 1,2-Dichlorobenzene | 2,4-Dimethylphenol | |
| 1,1,1-Trichloroethane | 1,3-Dichlorobenzene | 4,6-Dinitro-2-methylphenol | |
| 1,1,2-Trichloroethane | 1,4-Dichlorobenzene | 2,4-Dinitrophenol | |
| Trichloroethylene | 3,3-Dichlorobenzidine | 2-Nitrophenol | |
| Vinyl chloride | Diethyl phthalate | 4-Nitrophenol | |
| | Dimethyl phthalate | Phenol | |
| | 1,2-Diphenylhydrazine | Pentachlorophenol | |
| | 2,4-Dinitrotoluene | 2,4,6-Trichlorophenol | |
| | 2,6-Dinitrotoluene | | |
| IND1 Analyte List | | | |
| Indicator Parameters | Field Parameters | | |
| TOC | Temperature | Dissolved oxygen | |
| TOX | Specific conductivity | Eh | |
| | pH | | |

NOTE (1): Acid extractable semi-volatile organics sampling only required in well K13-M02B

Table 1: Part 2A
Chambers Works Groundwater Perimeter Monitoring Program

PERIMETER MONITORING PROGRAM SAMPLING SCHEDULE

| Sampling event: Sampling parameters: | | | | Jul 1999 IND1 PPI | | Jan 2000 IND1 PPI | | Jul 2000 IND1 PPI | | Jan 2001 IND1 PPI | | Jul 2001 IND1 PPI | | Jan 2002 IND1 PPI | | Jul 2002 IND1 PPI | | |
|---|----------------------|---------|--|----------------------|---|----------------------|----|----------------------|---|----------------------|----|----------------------|---|----------------------|----|----------------------|---|---|
| PMP Well Id | Perimeter Section | Aquifer | | | | | | | | | | | | | | | | |
| K18-P01B | CWW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| H17-M01B | CWW | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| G16-M03B | CWW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| E15-M01B | CWW | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| E16-M01B | CWW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| D15-M01B | CWW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| D14-M01B | CWW | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| C11-M01B | CWW | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| C10-M01B | CWW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| C09-M01B | CWW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| C07-M01B | CWW | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| D06-M01B | CWS | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| F06-M02B | CWS | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| G05-M02B | CWS | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| J05-M02B | CWS | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| L04-M01B | CWS | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| N04-M01B | CWE | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| P06-M01B | CWE | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| R09-M01B | CWE | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| U08-M01B | CWE | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| U12-M01A(B) | CWE | B | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| O26-M01B | CPW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| R31-M01B | CPW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| S32-M01B | CPW | B | | | A | A | -- | -- | A | A | -- | -- | A | A | -- | -- | A | B |
| H17-M01C | CWW | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| C11-M01C | CWW | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| J05-M01B(C) | CWS | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| N04-M01C | CWE | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| P06-M02C | CWE | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| R09-M02C | CWE | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| U12-M01B(C) | CWE | C | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| C11-M02D | CWW | D | | | A | A | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| J05-M01C(D) | CWS | D | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| N04-M01D | CWE | D | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| P06-M01D | CWE | D | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |
| R09-R01D | CWE | D | | | A | -- | -- | -- | A | B | -- | -- | A | -- | -- | -- | A | B |

SAMPLING FREQUENCY

S = SEMI-ANNUALLY (TWO TIMES PER YEAR)
A = ANNUALLY (ONE TIME PER YEAR)
B = BIENNIALY (ONE TIME EVERY TWO YEARS)
-- not required

PERIMETER SECTIONS

CWW = Chambers Works Western Perimeter along Delaware River
CWS = Chambers Works Southern Perimeter along Salem Canal
CWE = Chambers Works Eastern Perimeter along Route 130
CPW = Carneys Point Western Perimeter along Delaware River

Existing wells C09-M01B, D06-M01B, C11-M02D, G05-M02B, G16-M03B, K18-P01B, O26-M01B, R31-M01B, S32-M01B, and newly installed wells (D15-M01B, E16-M01B, & C10-M01B) that are new to the PMP are indicated in bold-face and will be sampled annually until July 2002 to collect sufficient data for statistical analyses. After July 2002, all PMP wells will be sampled biennially

Analyte Lists (attached)

IND1= indicator parameters

PPI=priority pollutant list (PPL) volatile organic, semi-volatile organic, and metals, and additional Chambers Works Constituents of Concern by perimeter section.

Table 1: Part 2B
Chambers Works Groundwater Perimeter Monitoring Program

| Chambers Works Perimeter Monitoring Program Analyte List | | | |
|--|--|----------------------------|---|
| Priority Pollutant Volatile Organics | Priority Pollutant Semivolatile Organics | Additional Parameters (2) | |
| Benzene | Base Neutral Extractable | Di-n-octyl phthalate | Aniline |
| Bromodichloromethane | Acenaphthylene | Fluoranthene | 4-Chloroaniline |
| Bromoform | Acenaphthene | Fluorene | 1-Naphthylamine |
| Bromomethane | Anthracene | Hexachlorobenzene | 2-Naphthylamine |
| Carbon tetrachloride | Benzidine | Hexachlorobutadiene | o-Toluidine |
| Chlorobenzene | Benzo(a) anthracene | Hexachlorocyclopentadiene | Trichlorobenzene |
| Chloroethane | Benzo(b) fluoranthene | Hexachloroethane | Trichlorofluoromethane |
| Chloroform | Benzo(k) fluoranthene | Indeno(1,2,3-c,d)pyrene | Xylene |
| Chloromethane | Benzo(ghi) perylene | Isophorone | Dissolved lead |
| Dibromochloromethane | Benzo(a) pyrene | Naphthalene | Organic Lead |
| 1,1-Dichloroethane | bis(2-Chloroethoxy) methane | Nitrobenzene | Priority Pollutant Total Metals: |
| 1,2-Dichloroethane | bis(2-Chloroethyl) ether | Nitrosodimethylamine | Aluminum (3) |
| 1,1-Dichloroethene | bis(2-Chloroisopropyl) ether | N-Nitroso-diphenyl amine | Antimony (3) |
| trans-1,2-Dichloroethene | bis(2-Ethylhexyl) phthalate | N-Nitroso-di-n-propylamine | Arsenic(3) |
| 1,2-Dichloropropane | 4-Bromophenyl phenyl ether | Phenanthrene | Beryllium(3) |
| cis-1,3-Dichloropropene | Butyl benzyl phthalate | Pyrene | Cadmium(3) |
| trans-1,3-Dichloropropene | 2-Chloronaphthalene | 1,2,4-Trichlorobenzene | Chromium (3) |
| Ethylbenzene | 4-Chlorophenyl phenyl ether | Acid Extractable(1) | Iron(3) |
| Methylene chloride | Chrysene | 4-chloro-3-methylphenol | Lead(3) |
| 1,1,2,2-Tetrachloroethane | Di-n-butylphthalate | 2-Chlorophenol | Nickel(3) |
| Tetrachloroethene | Dibenzo (a,h) anthracene | 2,4-Dichlorophenol | Sodium(3) |
| Toluene | 1,2-Dichlorobenzene | 2,4-Dimethylphenol | Cyanide (4) |
| 1,1,1-Trichloroethane | 1,3-Dichlorobenzene | 4,6-Dinitro-2-methylphenol | Mercury (4) |
| 1,1,2-Trichloroethane | 1,4-Dichlorobenzene | 2,4-Dinitrophenol | Selenium (4) |
| Trichloroethylene | 3,3-Dichlorobenzidine | 2-Nitrophenol | Silver (4) |
| Vinyl chloride | Diethyl phthalate | 4-Nitrophenol | Thallium (4) |
| | Dimethyl phthalate | Phenol | Zinc (4) |
| | 1,2-Diphenylhydrazine | Pentachlorophenol | |
| | 2,4-Dinitrotoluene | 2,4,6-Trichlorophenol | |
| | 2,6-Dinitrotoluene | | |
| IND1 Analyte List | | | |
| Indicator Parameters | Field Parameters | | |
| TOC | Temperature | Dissolved oxygen | |
| TOX | Specific conductivity | Eh | |
| | pH | | |
| (1) Acid extractable semivolatile organics sampling required for B Aquifer CWS only. | | | |
| (2) Additional parameters for B aquifer CWW and CWS only | | | |
| (3) Total metals for B aquifer CWW, CWS, and CPW | | | |
| (4) Total metals for B aquifer CPW only | | | |

Table 2
Classification Exception Area 1 Compound List

| Compound Name | Chemical Abstract Service Number | Total or Dissolved | Maximum Concentration (ug/l) | NJGWClass IIA Criteria (ug/l) | New Compound to List (X) |
|------------------------------|----------------------------------|--------------------|------------------------------|-------------------------------|--------------------------|
| 1,1,1-TRICHLOROETHANE | 71556 | T | 9500 | 30 | |
| 1,1,2,2-TETRACHLOROETHANE | 79345 | T | 17500 | 2 | |
| 1,1,2-TRICHLOROETHANE | 79005 | T | 12500 | 3 | |
| 1,1-DICHLOROETHENE | 75354 | T | 7000 | 2 | |
| 1,2,4-TRICHLOROBENZENE | 120821 | T | 42000 | 9 | |
| 1,2-DICHLOROBENZENE | 95501 | T | 230000 | 600 | |
| 1,2-DICHLOROETHANE | 107062 | T | 58000 | 2 | |
| 1,2-DICHLOROPROPANE | 78875 | T | 15000 | 1 | |
| 1,2-DIPHENYLHYDRAZINE | 122667 | T | 530 | .04 | |
| 1,2-TRANS-DICHLOROETHYLENE | 156605 | T | 4190 | 100 | X |
| 1,3-DICHLOROBENZENE | 541731 | T | 730 | 600 | X |
| 1,4-DICHLOROBENZENE | 106467 | T | 8400 | 75 | |
| 2,4-DICHLOROPHENOL | 120832 | T | 250 | 20 | |
| 2,4-DINITROPHENOL | 51285 | T | 1250 | 40 | |
| 2,4-DINITROTOLUENE | 121142 | T | 51000 | 10 | |
| 2-CHLOROPHENOL | 95578 | T | 250 | 40 | |
| 4-METHYL-2-PENTANONE | 108101 | T | 32100 | 400 | X |
| ACETONE | 67641 | T | 25000 | 700 | |
| ALPHA BHC | 319846 | T | 5.5 | .02 | |
| ALUMINUM | 7429905 | T | 67100 | 200 | |
| ALUMINUM | 7429905 | D | 352000 | 200 | |
| AMMONIA AS N | 7664417 | T | 3500 | 500 | |
| ANTIMONY | 7440360 | T | 95 | 20 | |
| ANTIMONY | 7440360 | D | 110 | 20 | |
| ARSENIC | 7440382 | T | 190 | 8 | |
| ARSENIC | 7440382 | D | 120 | 8 | |
| BENZENE | 71432 | T | 28000 | 1 | |
| BENZO (A) ANTHRACENE | 56553 | T | 250 | 10 | X |
| BENZO (B) FLUORANTHENE | 205992 | T | 250 | 10 | X |
| BENZO (K) FLUORANTHENE | 207089 | T | 250 | 2 | X |
| BERYLLIUM | 7440417 | D | 37 | 20 | |
| BERYLLIUM | 7440417 | T | 52 | 20 | |
| BETA BHC | 319857 | T | 2.700000048 | .2 | |
| BIS (2-CHLOROETHYL) ETHER | 111444 | T | 250 | 10 | |
| BIS (2-ETHYLHEXYL) PHTHALATE | 117817 | T | 630 | 30 | |
| BROMODICHLOROMETHANE | 75274 | T | 5500 | 1 | |
| BROMOFORM | 75252 | T | 12000 | 4 | |
| CADMIUM | 7440439 | T | 13 | 4 | |
| CADMIUM | 7440439 | D | 617 | 4 | |
| CARBON TETRACHLORIDE | 56235 | T | 9850 | 2 | |
| CHLOROBENZENE | 108907 | T | 89000 | 4 | |
| CHLOROFORM | 67663 | T | 12000 | 6 | |
| CHROMIUM | 7440473 | D | 455 | 100 | |
| CHROMIUM | 7440473 | T | 2930 | 100 | |
| CHRYSENE | 218019 | T | 250 | 20 | X |
| COPPER | 7440508 | T | 1210 | 1000 | |
| CYANIDE, TOTAL | 57125 | T | 387 | 200 | |
| DIELDRIN | 60571 | T | 5.5 | .03 | |
| DIMETHYL PHTHALATE | 131113 | T | 11000 | 7000 | X |
| ENDOSULFAN I | 959988 | T | 5.5 | .4 | |
| ENDOSULFAN II | 33213659 | T | 5.5 | .4 | |
| ETHYLBENZENE | 100414 | T | 18000 | 700 | |

Table 1: Part 3
Secure C Landfill Corrective Action Groundwater Monitoring Requirements

| Secure C Landfill Corrective Action Sampling Schedule | | | |
|---|------------------------------------|------------------------|---------------------|
| Monitor Well | Sampling Frequency (IND1 & CLF-CA) | | |
| P21-M01B | SA | | |
| P21-M03B | SA | | |
| Q20-M02B | SA | | |
| Q21-M01B | SA | | |
| Q23-M01B* | SA | | |
| R20-M02B | SA | | |
| S21-M01B* | SA | | |
| * Background wells for Corrective Action and Detection Monitoring Programs at the Secure C Landfill | | | |
| SA = semiannually | | | |
| IND1 Analyte List | | | |
| Indicator Parameters | Field Parameters | | |
| TOC | Temperature | | |
| TOX | Specific conductivity | | |
| | pH | | |
| | Dissolved oxygen | | |
| | Eh | | |
| Secure C Landfill Corrective Action (CLF-CA) Analyte List | | | |
| Indicator Parameters | Volatiles | Semivolatiles | Inorganics |
| pH (field parameter) | benzene | 1,2-dichlorobenzene | aluminum (total) |
| Eh (field parameter) | chlorobenzene | 1,2,4-trichlorobenzene | ammonia |
| Specific Conduct (field) | chloroform | 1,4-dichlorobenzene | arsenic (total) |
| Temp (field parameter) | methylene chloride | 4-chloroaniline | chloride |
| TOC | toluene | aniline | cyanide (total) |
| TOX | trichloroethylene | n-nitrosodimethylamine | lead (total) |
| Total Phenolics | | naphthalene | nitrate as nitrogen |
| DO (field) | | o-toluidine | sodium sulfate |

Table 2
Classification Exception Area 1 Compound List

| Compound Name | Chemical Abstract Service Number | Total or Dissolved | Maximum Concentration (ug/l) | NJGWCClass IIA Criteria (ug/l) | New Compound to List (X) |
|-------------------------|----------------------------------|--------------------|------------------------------|--------------------------------|--------------------------|
| HEPTACHLOR | 76448 | T | 2.700000048 | .4 | |
| HEXACHLOROBENZENE | 118741 | T | 250 | 10 | |
| HEXACHLOROBUTADIENE | 87683 | T | 250 | 1 | X |
| HEXACHLOROETHANE | 67721 | T | 250 | 10 | |
| IRON | 7439896 | T | 224000 | 300 | |
| IRON | 7439896 | D | 3270000 | 300 | |
| LEAD | 7439921 | T | 11400 | 10 | |
| LEAD | 7439921 | D | 2570 | 10 | |
| MANGANESE | 7439965 | T | 8200 | 50 | |
| MANGANESE | 7439965 | D | 32500 | 50 | |
| MERCURY | 7439976 | D | 4.199999809 | 2 | |
| MERCURY | 7439976 | T | 3.400000095 | 2 | |
| METHYLENE CHLORIDE | 75092 | T | 7000 | 2 | |
| NICKEL | 7440020 | T | 2060 | 100 | |
| NICKEL | 7440020 | D | 1100 | 100 | |
| NITRATE AS N | 14797558 | T | 25000 | 10000 | |
| NITROBENZENE | 98953 | T | 270000 | 10 | |
| N-NITROSODIPHENYLAMINE | 86306 | T | 18000 | 20 | |
| PCB-1016 | 12674112 | T | 27 | .5 | |
| PCB-1232 | 11141165 | T | 27 | .5 | |
| PCB-1248 | 12672296 | T | 3030 | .5 | |
| PENTACHLOROPHENOL | 87865 | T | 1250 | 1 | |
| PH | C-006 | T | 12.6 | 8.5 | |
| SELENIUM | 7782492 | T | 390 | 50 | |
| SILVER | 7440224 | T | 570 | 20 | |
| SODIUM | 7440235 | T | 624000 | 50000 | |
| SODIUM | 7440235 | D | 9950000 | 50000 | |
| SULFATE (TURBIDIMETRIC) | 14808798 | T | 11500000 | 250000 | |
| TETRACHLOROETHENE | 127184 | T | 36100 | 1 | |
| TOLUENE | 108883 | T | 22000 | 1000 | |
| TOTAL DISSOLVED SOLIDS | C-010 | T | 57000000 | 500000 | |
| TRICHLOROETHENE | 79016 | T | 4750 | 1 | |
| VINYL CHLORIDE | 75014 | T | 25000 | 5 | |
| XYLENE (TOTAL) | 1330207 | T | 25000 | 40 | |
| ZINC | 7440666 | D | 11800 | 5000 | |

Table 3
Classification Exception Area 2 Compound List

| Compound Name | Chemical Abstract Service Number | Total or Dissolved | Maximum Concentration (ug/l) | NJGWClass IIA Criteria (ug/l) | New Compound to List (X) |
|------------------------------|----------------------------------|--------------------|------------------------------|-------------------------------|--------------------------|
| 1,1,2,2-TETRACHLOROETHANE | 79345 | T | 345 | 2 | X |
| 1,1,2-TRICHLOROETHANE | 79005 | T | 250 | 3 | X |
| 1,1-DICHLOROETHENE | 75354 | T | 140 | 2 | X |
| 1,2,4-TRICHLOROBENZENE | 120821 | T | 16.20000076 | 9 | |
| 1,2-DICHLOROETHANE | 107062 | T | 140 | 2 | |
| 1,2-TRANS-DICHLOROETHYLENE | 156605 | T | 231 | 100 | X |
| 2,4-DINITROPHENOL | 51285 | T | 215 | 40 | X |
| 2,4-DINITROTOLUENE | 121142 | T | 29 | 10 | X |
| ACETONE | 67641 | T | 1340 | 700 | X |
| ALDRIN | 309002 | T | 1 | 0.04 | X |
| ALUMINUM | 7429905 | D | 3200 | 200 | |
| ALUMINUM | 7429905 | T | 169000 | 200 | |
| AMMONIA AS N | 7664417 | T | 4200 | 500 | X |
| ANTIMONY | 7440360 | T | 270 | 20 | X |
| ANTIMONY | 7440360 | D | 580 | 20 | X |
| ARSENIC | 7440382 | D | 72 | 8 | |
| ARSENIC | 7440382 | T | 140 | 8 | |
| BENZENE | 71432 | T | 331 | 1 | |
| BERYLLIUM | 7440417 | D | 39 | 20 | X |
| BERYLLIUM | 7440417 | T | 57.59999847 | 20 | X |
| BIS (2-ETHYLHEXYL) PHTHALATE | 117817 | T | 1100 | 30 | |
| BROMODICHLOROMETHANE | 75274 | T | 110 | 1 | X |
| CADMIUM | 7440439 | D | 11600 | 4 | X |
| CADMIUM | 7440439 | T | 64 | 4 | X |
| CHLOROBENZENE | 108907 | T | 1470 | 4 | |
| CHLOROFORM | 67663 | T | 225 | 6 | |
| CHROMIUM | 7440473 | D | 150 | 100 | X |
| CHROMIUM | 7440473 | T | 297 | 100 | X |
| CYANIDE, TOTAL | 57125 | T | 1200 | 200 | X |
| DIELDRIN | 60571 | T | 1.350000024 | 0.03 | X |
| DI-N-OCTYL PHTHALATE | 117840 | T | 127 | 100 | X |
| HARDNESS AS CaCO3 | 471341 | T | 4750000 | 250000 | X |
| HEPTACHLOR EPOXIDE | 1024573 | T | 1.149999976 | 0.2 | X |
| IRON | 7439896 | T | 736000 | 300 | |
| IRON | 7439896 | D | 1251000 | 300 | |
| LEAD | 7439921 | T | 132 | 10 | |
| LEAD | 7439921 | D | 330 | 10 | |
| MANGANESE | 7439965 | T | 291000 | 50 | |
| MANGANESE | 7439965 | D | 24600 | 50 | |
| MERCURY | 7439976 | T | 6.199999809 | 2 | X |
| MERCURY | 7439976 | D | 5.699999809 | 2 | X |
| METHYLENE CHLORIDE | 75092 | T | 1880 | 2 | |
| NICKEL | 7440020 | D | 5710 | 100 | X |
| NICKEL | 7440020 | T | 7980 | 100 | X |
| N-NITROSODIMETHYLAMINE | 62759 | T | 954 | 20 | |
| PH | C-006 | T | 11.19999981 | 8.5 | X |
| SILVER | 7440224 | D | 35 | 20 | X |
| SILVER | 7440224 | T | 102 | 20 | X |
| SODIUM | 7440235 | T | 602700 | 50000 | |

Table 3
Classification Exception Area 2 Compound List

| SODIUM | 7440235 | D | 146000 | 50000 | |
|------------------------|----------------------------------|--------------------|------------------------------|-------------------------------|--------------------------|
| Compound Name | Chemical Abstract Service Number | Total or Dissolved | Maximum Concentration (ug/l) | NJGWClass IIA Criteria (ug/l) | New Compound to List (X) |
| TETRACHLOROETHENE | 127184 | T | 220 | 1 | X |
| TOTAL DISSOLVED SOLIDS | C-010 | T | 9346000 | 500000 | X |
| TRICHLOROETHENE | 79016 | T | 140 | 1 | |
| VINYL CHLORIDE | 75014 | T | 500 | 5 | X |
| ZINC | 7440666 | D | 46000 | 5000 | X |
| ZINC | 7440666 | T | 51900 | 5000 | X |

TABLE 4

Groundwater Wells and Staff Gauges Used For Water Level Measurements

| Well ID | TOC Elevation | Aquifer | Well ID | TOC Elevation | Aquifer | Well ID | TOC Elevation | Aquifer | Well ID | TOC Elevation | Aquifer |
|----------|---------------|-----------|----------|---------------|-----------|----------|---------------|-----------|-----------|---------------|----------------|
| F16-P01A | 11.24 | A-ZONE | G14-M01B | 7.63 | B Aquifer | L13-M01B | 6.69 | B Aquifer | R19-M02B | 6.14 | B Aquifer |
| G16-M01A | 8.90 | A-ZONE | G14-P02B | 5.73 | B Aquifer | L14-M01B | 9.72 | B Aquifer | R20-M01B | 4.79 | B Aquifer |
| G16-M02A | 9.48 | A-ZONE | G15-M01B | 8.39 | B Aquifer | L15-M01B | 5.78 | B Aquifer | R20-M02B | 5.48 | B Aquifer |
| G16-P01A | 7.67 | A-ZONE | G16-M01B | 7.69 | B Aquifer | L16-M01B | 2.40 | B Aquifer | R31-M01B | 8.31 | B Aquifer |
| G16-P02A | 9.46 | A-ZONE | G16-M02B | 5.96 | B Aquifer | L19-M01B | 10.94 | B Aquifer | S09-M01B | 5.31 | B Aquifer |
| G16-P03A | 8.01 | A-ZONE | G16-M03B | 8.62 | B Aquifer | M03-M01B | 10.97 | B Aquifer | S11-M01B | 9.39 | B Aquifer |
| G16-P04A | 8.09 | A-ZONE | G16-M04B | 8.55 | B Aquifer | M12-M01B | 9.94 | B Aquifer | S19-M01B | 4.90 | B Aquifer |
| H16-P01A | 8.90 | A-ZONE | G17-P01B | 9.21 | B Aquifer | M15-M01B | 3.72 | B Aquifer | S19-M02B | 7.83 | B Aquifer |
| H16-P02A | 7.53 | A-ZONE | H10-M01B | 7.69 | B Aquifer | M15-M02B | 6.30 | B Aquifer | S21-M01B | 7.40 | B Aquifer |
| H17-M01A | 10.19 | A-ZONE | H13-M01A | 8.84 | B Aquifer | N04-M01B | 8.49 | B Aquifer | S23-P02B | 9.41 | B Aquifer |
| H17-P01A | 8.42 | A-ZONE | H13-M02B | 12.29 | B Aquifer | N08-M01B | 6.58 | B Aquifer | S24-P01B | 6.49 | B Aquifer |
| I17-M01A | 9.42 | A-ZONE | H13-P01B | 6.15 | B Aquifer | O05-M01B | 9.17 | B Aquifer | S32-M01B | 6.27 | B Aquifer |
| I17-M02A | 9.48 | A-ZONE | H13-P02B | 7.49 | B Aquifer | O12-M01B | 10.64 | B Aquifer | T14-M01A | 5.64 | B Aquifer |
| I17-P01A | 9.67 | A-ZONE | H14-M01B | 9.46 | B Aquifer | O16-P01B | 4.26 | B Aquifer | T20-M02B | 9.64 | B Aquifer |
| I17-P02A | 8.83 | A-ZONE | H15-M01B | 9.26 | B Aquifer | O26-M01B | 7.31 | B Aquifer | T21-M01A | 10.98 | B Aquifer |
| C07-M01B | 13.09 | B Aquifer | H15-P02B | 9.99 | B Aquifer | P06-M01B | 5.61 | B Aquifer | T22-M01B | 7.77 | B Aquifer |
| C09-M01B | 12.02 | B Aquifer | H16-M02B | 7.70 | B Aquifer | P20-M01B | 3.10 | B Aquifer | T27-M01B | 2.75 | B Aquifer |
| C11-M01B | 7.51 | B Aquifer | H16-P01B | 7.01 | B Aquifer | P21-M01B | 6.90 | B Aquifer | T28-M01B | 3.25 | B Aquifer |
| C11-M02B | 6.91 | B Aquifer | H17-M02B | 9.39 | B Aquifer | P21-M03B | 5.86 | B Aquifer | U08-M01B | 5.84 | B Aquifer |
| C14-P01A | 9.57 | B Aquifer | H17-M03B | 9.41 | B Aquifer | Q13-M02B | 7.72 | B Aquifer | U12-M01A | 2.63 | B Aquifer |
| D06-M01B | 9.96 | B Aquifer | I12-M02B | 7.48 | B Aquifer | Q20-M02B | 3.96 | B Aquifer | U14-M01A | 7.54 | B Aquifer |
| D07-M01B | 12.03 | B Aquifer | I17-M01B | 9.19 | B Aquifer | Q20-M03B | 2.63 | B Aquifer | X17-M01B | 6.00 | B Aquifer |
| D08-P02B | 9.86 | B Aquifer | J05-M02B | 11.53 | B Aquifer | Q21-M01B | 6.67 | B Aquifer | X26-M01A | 3.76 | B Aquifer |
| D11-M01B | 7.21 | B Aquifer | J11-M01B | 9.76 | B Aquifer | Q22-M01B | 5.72 | B Aquifer | X27-M01B | 3.60 | B Aquifer |
| D11-P01A | 7.37 | B Aquifer | J16-M01B | 6.45 | B Aquifer | Q22-M04B | 5.92 | B Aquifer | Z20-M01B | 11.96 | B Aquifer |
| D13-M01B | 6.34 | B Aquifer | J17-M01B | 10.25 | B Aquifer | Q23-M01B | 5.13 | B Aquifer | Z28-M01B | 6.33 | B Aquifer |
| D14-M01B | 7.72 | B Aquifer | K10-M01B | 7.94 | B Aquifer | Q25-P01B | 4.48 | B Aquifer | H11-R01CD | 9.00 | C & D Aquifers |
| E15-M01B | 7.42 | B Aquifer | K12-M01B | 7.58 | B Aquifer | Q27-M01B | 13.24 | B Aquifer | K02-W01CD | 10.36 | C & D Aquifers |
| F06-M02B | 9.01 | B Aquifer | K13-M02B | 6.57 | B Aquifer | R08-M01B | 8.20 | B Aquifer | K06-R02CD | 11.46 | C & D Aquifers |
| F07-M01B | 8.61 | B Aquifer | K15-P01A | 4.52 | B Aquifer | R09-M01B | 6.29 | B Aquifer | M14-R02CD | 6.66 | C & D Aquifers |
| F08-M01B | 10.05 | B Aquifer | K16-M01B | 6.89 | B Aquifer | R12-M01A | 8.47 | B Aquifer | AA25-M01B | 4.89 | C Aquifer |
| F11-M01B | 9.12 | B Aquifer | K17-M01B | 3.55 | B Aquifer | R13-M01A | 7.68 | B Aquifer | C11-M01C | 6.86 | C Aquifer |
| F16-M01B | 10.92 | B Aquifer | K18-P01B | 9.87 | B Aquifer | R15-M01A | 9.28 | B Aquifer | F07-M01C | 8.64 | C Aquifer |
| G05-M02B | 8.64 | B Aquifer | L04-M01B | 14.52 | B Aquifer | R19-M01B | 9.05 | B Aquifer | G04-M01B | 11.75 | C Aquifer |
| H04-M01B | 11.32 | C Aquifer | S09-M02C | 4.99 | C Aquifer | P06-M01D | 5.90 | D Aquifer | Y31-M01C | 8.30 | D Aquifer |

TABLE 4

Groundwater Wells and Staff Gauges Used For Water Level Measurements

| Well ID | TOC Elevation | Aquifer | Well ID | TOC Elevation | Aquifer | Well ID | TOC Elevation | Aquifer | Well ID | TOC Elevation | Aquifer |
|----------|---------------|-----------|-----------|---------------|-----------|----------|---------------|-----------|-----------|---------------|-------------|
| H10-M02C | 7.88 | C Aquifer | S11-M01C | 9.62 | C Aquifer | P29-M01C | 10.49 | D Aquifer | Z28-M01C | 6.24 | D Aquifer |
| H16-M01B | 7.26 | C Aquifer | S23-P01B | 3.38 | C Aquifer | Q08-M01D | 6.51 | D Aquifer | AA22-M01C | 7.92 | E Aquifer |
| H17-M01B | 10.30 | C Aquifer | S27-M05B | 6.18 | C Aquifer | Q13-M01D | 8.72 | D Aquifer | G05-W01E | 7.04 | E Aquifer |
| J05-M01B | 9.15 | C Aquifer | S32-M02B | 7.69 | C Aquifer | Q17-W01D | 2.93 | D Aquifer | H05-M03E | 8.54 | E Aquifer |
| K12-M01C | 5.27 | C Aquifer | T29-M01B | 4.65 | C Aquifer | Q20-M01C | 2.74 | D Aquifer | H05-M05E | 7.72 | E Aquifer |
| K13-M01C | 6.57 | C Aquifer | T31-M01B | 4.71 | C Aquifer | Q21-M01C | 8.04 | D Aquifer | H11-M01E | 7.42 | E Aquifer |
| K17-M01C | 2.98 | C Aquifer | U08-M01C | 5.82 | C Aquifer | Q24-P01C | 6.91 | D Aquifer | H14-M01D | 9.51 | E Aquifer |
| L13-M01C | 6.82 | C Aquifer | U12-M01B | 3.24 | C Aquifer | Q27-M01C | 13.55 | D Aquifer | H17-M01D | 10.12 | E Aquifer |
| L15-M01C | 6.92 | C Aquifer | U14-M01B | 7.69 | C Aquifer | Q30-M02C | 9.52 | D Aquifer | J04-M01E | 10.46 | E Aquifer |
| L19-M01C | 11.44 | C Aquifer | W16-M01B | 2.63 | C Aquifer | R08-M01D | 8.33 | D Aquifer | J05-M01E | 10.49 | E Aquifer |
| M12-M01C | 10.01 | C Aquifer | X26-M01B | 3.80 | C Aquifer | R09-R01D | 6.40 | D Aquifer | J05-W01E | 7.25 | E Aquifer |
| M15-M01C | 3.08 | C Aquifer | Y31-M01B | 8.76 | C Aquifer | R22-M01C | 8.47 | D Aquifer | K09-M01E | 9.61 | E Aquifer |
| M22-M01B | 9.96 | C Aquifer | Z20-M01B | 11.96 | C Aquifer | R26-M01C | 6.70 | D Aquifer | L19-M01D | 11.36 | E Aquifer |
| N04-M01C | 7.67 | C Aquifer | Z28-M01B | 6.33 | C Aquifer | R31-M01C | 7.64 | D Aquifer | P06-M01E | 5.67 | E Aquifer |
| N08-M01C | 6.47 | C Aquifer | AA22-M01B | 7.88 | D Aquifer | S09-M01D | 6.07 | D Aquifer | P11-M01E | 12.65 | E Aquifer |
| O05-M01C | 9.54 | C Aquifer | AA25-M01C | 5.21 | D Aquifer | S09-M02D | 10.49 | D Aquifer | R15-W01E | 9.38 | E Aquifer |
| O12-M02C | 13.51 | C Aquifer | C11-M02D | 6.70 | D Aquifer | S11-M01D | 9.54 | D Aquifer | S32-M01D | 7.35 | E Aquifer |
| P06-M02C | 5.85 | C Aquifer | F07-M01D | 8.50 | D Aquifer | S26-P01C | 4.01 | D Aquifer | V21-W01E | 8.19 | E Aquifer |
| P29-M01B | 10.46 | C Aquifer | H10-M01C | 7.87 | D Aquifer | S32-M02C | 7.26 | D Aquifer | Z20-M01C | 11.59 | E Aquifer |
| Q13-M01C | 7.27 | C Aquifer | H14-M01C | 9.40 | D Aquifer | T14-M01C | 5.69 | D Aquifer | E07-W01F | 6.70 | F Aquifer |
| Q26-P01C | 7.34 | C Aquifer | H15-M01C | 8.92 | D Aquifer | T22-M01C | 7.80 | D Aquifer | H11-W01F | 7.93 | F Aquifer |
| Q30-M01B | 9.23 | C Aquifer | H17-M01C | 9.50 | D Aquifer | T24-M01C | 4.51 | D Aquifer | K09-M01F | 9.68 | F Aquifer |
| R08-M01C | 8.40 | C Aquifer | J05-M01C | 9.18 | D Aquifer | T27-M01C | 4.07 | D Aquifer | P11-M01F | 13.03 | F Aquifer |
| R09-M02C | 5.98 | C Aquifer | K12-M01D | 4.72 | D Aquifer | T28-M01C | 4.69 | D Aquifer | C13-SG01 | | Staff Gauge |
| R09-R02C | 5.54 | C Aquifer | M22-M01C | 9.69 | D Aquifer | T31-M01C | 4.60 | D Aquifer | E05-SG01 | | Staff Gauge |
| R12-M01B | 8.87 | C Aquifer | N04-M01D | 8.30 | D Aquifer | U08-M01D | 5.88 | D Aquifer | E05-SG02 | | Staff Gauge |
| R13-M01B | 7.83 | C Aquifer | N08-M01D | 6.26 | D Aquifer | U12-M01C | 3.01 | D Aquifer | H16-SG01 | | Staff Gauge |
| R15-M01C | 9.13 | C Aquifer | O05-M01D | 9.15 | D Aquifer | U14-M01C | 7.98 | D Aquifer | I17-SG01 | | Staff Gauge |
| R19-M01C | 4.85 | C Aquifer | O12-M02D | 11.89 | D Aquifer | W16-M01C | 2.73 | D Aquifer | L19-SG01 | | Staff Gauge |
| S09-M01C | 10.27 | C Aquifer | O26-M01C | 8.88 | D Aquifer | X26-M01C | 3.77 | D Aquifer | M03-SG01 | | Staff Gauge |

APPENDIX A

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: _____

Name of Facility: _____

Location: _____

NJPDES Permit Number: NJ0083429

CERTIFICATION

Well Permit Number: ____ - ____ - ____ - ____

Owner's Well Number _____

Well Completion Date: _____

Lithologic Log: Attach _____

Distance from Top of Casing (cap off) to
ground surface (one-hundredth of a foot): _____

Total Depth of Well to the nearest 1/2 foot: _____

Depth to Top of Screen (or Top of Open Hole)
From Top of Casing (one-hundredth of a foot): _____

Screen Length (or length of open hole) in feet: _____

Screen or Slot Size: _____

Screen or Slot Material: _____

Casing Material: (PVC, Steel or Other-Specify): _____

Casing Diameter (inches): _____

Static Water Level From Top of Casing at the Time
of Installation (one-hundredth of a foot): _____

Yield (gallons per minute): _____

Development Technique (specify): _____

Length of Time Well is Developed/Pumped or Bailed: Hours Minutes

Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

Name (Type or Print) Signature

Seal

Certification or License No.

Certification by Executive Officer or Duly Authorized Representative:

Name (Type or Print) Signature Date

Title: _____

SIGNATORY REQUIREMENTS

The form entitled "Monitoring Well Certification - Form A - As- Built Construction Certification", must be signed by one of the following: a New Jersey licensed Professional Engineer; a licensed New Jersey Well Driller; a geologist certified by any State; a geologist certified by the American Institute of Professional Geologists; an individual certified by the American Institute of Hydrology; any other person approved by the Department.

Form B, "Location Certification", must be signed and sealed by a Licensed New Jersey Land Surveyor.

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: _____

Name of Facility: _____

Location: _____

NJPDES Permit Number: NJ0083429

EPA Number: NJD002385730

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: _____

(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): _____

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West _____ Latitude: North _____

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North _____ East _____

Elevation of Top of Inner Casing (cap off) at
reference mark (nearest 0.01'): _____

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

DATE

PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER
